

## age 1 of 1

[illegible]

Received by: SD/0-1-10 Date: \_\_\_\_\_ Signature: \_\_\_\_\_



P205527

## METALLURGICAL TEST REPORT

740 Imperial Road North

Mail To:

Certificate: 20706 2  
Customer: 007112 001

RUSSEL METALS, INC.  
C/O METAUX RUSSEL  
1300 GRAHAM BELT  
BOUCHERVILLE, QC J4B6H5

Ship To:

RUSSEL METALS, INC.  
C/O METAUX RUSSEL  
1300 GRAHAM BELT  
BOUCHERVILLE, QC J4B6H5

North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

Date: 1/09/2015 Page: 1

Steel: 304/304L

Finish: 2B

Corrosion: ASTM A262/02aE/180Bend-OK

Your Order: M97012260

NAS Order: DS 0006943 05

## PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED. UNS 30400/30403  
ASTM A240/13E, A480/13, A666/10, ASME SA240/13, SA480/13, SA666/13  
CHEM ONLY ON FOLLOWING ASTM: A276/13, A479/13E, A484/13E, A312/13  
CHEM ONLY ON FOLLOWING ASME: SA312/13, SA479/13  
AMS 5511H/5513J XMK; MIL-5059D AMD3(X CRN MEAS); MIL-4043B  
NACE MR0175/ISO 15156-3:2003 A, MR0103/07; QCS766D-A X MAG PERM  
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

## REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.  
EN 10204:2004 3.1; ROHS 1 & 2 Compliant  
Material is Free of Radioactive Contamination  
NAS Steel Making Process: EAF, AOD, & Cont. Casting  
Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001  
\*Melted & Manufactured in the USA; Mat'l is DFRAs Compliant

Product Id	Coil #	Skid #	Thickness	Width	Weight	-----Length-----	Mark	Pieces	Commodity Code
04R7J9 BA	04R7J9 BA		.0590	48.0000	10,340	COIL	11	1	

## CHEMICAL ANALYSIS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

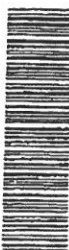
Chemical Analysis per ASTM A751/08

HEAT	CM	C %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
R7J9	US	.0150	18.0595	.4715	1.7825	.2430	.0767	8.0330	.0325	.0010
	SI %									
						.2930				

## MECHANICAL PROPERTIES

Product Id#	Coil #	1 d o l c x	UTS KSI	20C .2% YS KSI	ELONG % -2"	Hard RB	Tail Hard
04R7J9 BA	04R7J9 BA	F T	96.99	50.18	47.78	87.00	83.50

Métaux Russel



097041507

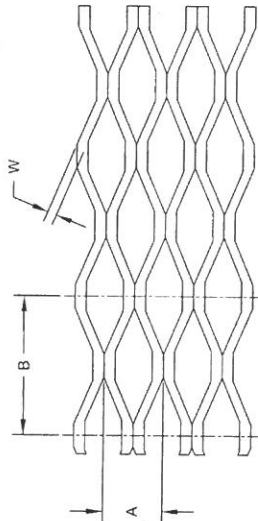
NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

ABHIJEET BRAVE -

1/09/2015

# SPECIFICATION CONTROL DRAWING



STYLE	SIZE OF DIAMOND <sup>1</sup>						SIZE OF STRAND				WEIGHT lb/ft <sup>2</sup>	
	"A"			"B"			WIDTH "W"		THICK		STD	FLAT
	STD	FLAT	STD	STD	FLAT	STD	STD	FLAT	STD	FLAT		
1/2-18	0.48	0.48	1.20	1.24	1.24	0.085	0.100	0.050	0.040	0.73	0.70	
1/2-16	0.48	0.48	1.20	1.24	1.24	0.085	0.100	0.062	0.050	0.91	0.90	
3/4-18	0.90	0.90	2.00	2.10	2.10	0.100	0.118	0.050	0.040	0.47	0.46	
3/4-16	0.90	0.90	2.00	2.10	2.10	0.100	0.118	0.062	0.050	0.60	0.57	
3/4-13	0.90	0.90	2.00	2.10	2.10	0.100	0.118	0.094	0.070	0.91	0.88	
3/4-9	0.90	0.90	2.00	2.10	2.10	0.150	0.165	0.140	0.120	2.05	1.96	

<sup>1</sup> A TOLERANCE OF +/- 10% OR +/- 0.07 (MIN) IS PERMITTED

RELEASED  
2010-05-28

PURCHASE MATERIAL: AISI 304/316 STAINLESS STEEL EXPANDED METAL MESH  
(REF. STAINLESS STEEL PER ASTM A240)

SPECIFICATION: ASTM F1267 OR MIL-M-17194D

PART NUMBER: M304EXYYTTF  
SIZE GA

YY = SIZE  
TT = GAUGE THICKNESS OF METAL  
F = FLATTENED (OPTIONAL)

EG. 3/4"-16F EXPANDED METAL MESH (FLATTENED) = M304EX075-16F.

B	REFORMAT DWG. ADD MIL/ASTM SPECS (ZN A8-1), ADD TABLE & DETAIL (ZN C6-1), REF NCR 09-090	CP	10.01.11
A	NEW ISSUE	DS	01.07.16
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG APPR			
APPROVED			
DE APPR			
DATE	10.01.11		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	REV. B
M304EX	SHEET 1 OF 1
TITLE	SCALE
304/316 SS EXPANDED METAL MESH	NTS
COPYRIGHT © 2001 BY DART AEROSPACE LTD. ALL RIGHTS RESERVED. NO PART OF THIS PUBLICATION MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.	

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M30462075-16F  
 DATE: 16-09-22

PO / BATCH NO.: P033600/M135660

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 400 p.i.<sup>2</sup>  
 QUANTITY INSPECTED: 400 p.i.<sup>2</sup>  
 QUANTITY REJECTED: \_\_\_\_\_

THICKNESS ORDERED: 16g.  
 THICKNESS RECEIVED: 16g.  
 SHEET SIZE ORDERED: 4x8'  
 SHEET SIZE RECEIVED: 4x8'

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/>	N	
CORROSION	Y	<input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/>	N	
CORRECT MATERIAL	<input checked="" type="radio"/>	N	
CORRECT THICKNESS	<input checked="" type="radio"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/>	
CORRECT MATERIAL	<input checked="" type="radio"/>	N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/>	N	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

*testers located in the Quality Office*

<b>QC 18 INSPECTION</b>		<b>ENGINEERING SIGNOFF (if required)</b>	
INSPECTED BY: <u>9-89</u>		SIGNED OFF BY: _____	
DATE: _____		DATE: _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO33600**

Purchase Order Date 9/9/2016 8:18:59 AM

PO Print Date 9/9/2016

Page Number 1 of 2

**Order From :**

VC-DIV001

DIVERSIFIED ULBRICH  
20 HYMUS BLV  
POINTE-CLAIRE, QC H9R 1C9  
CA

**Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**E-MAILED**  
SEP 09 2016

**Contact Name**

**Vendor Phone** 514 694 6522

**Ship To Contact**

**Ship To Phone**

**Ship Via:** Journey Freight collect

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M304EX0.75-16F ✓	Expanded Metal Flat SS ✓	9/14/2016 Yes 9/14/2016		480.00 ✓ sf	\$5.16	\$2,476.80

MATERIAL: 304 /316 STAINLESS STEEL EXPANDED METAL  
AS PER ASTM F1267 OR MIL-M-17194D  
NOTE: DIAMOND MUST RUN ALONG THE 8 FT

**Line Total:** \$2,476.80

2	71401-45	Procurement Quality Clause	9/14/2016 No 9/14/2016		1.00 ✓	\$0.00	\$0.00
---	----------	-------------------------------	------------------------------	--	--------	--------	--------

Procurement Quality Clauses  
A005 right of entry  
A012 chemical and physical test report  
A016 personnel qualification  
A017 raw material identification (as applicable)  
A026 certification of material conformance  
A041 quality management system  
A042 dart notification by supplier  
A043 retention of quality documents

*Sp16-9-15*

**Note:**

9/9/2016



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO33600

Purchase Order Date 9/9/2016 8:18:59 AM

PO Print Date 9/9/2016

Page Number 2 of 2

**Order From :**

VC-DIV001

DIVERSIFIED ULBRICH  
20 HYMUS BLV  
POINTE-CLAIRE, QC H9R 1C9  
CA

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone**

514 694 6522

**Ship To Contact**

**Ship To Phone**

**Ship Via:**

Journey Freight collect

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #**

10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

**Line Total:** \$0.00

**PO Total:** \$2,476.80

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr: 1

Change Date: 9/9/2016